

Rotary Shafts - D Tolerance h9 (Cold-drawn) / h7 (Ground) / g6 (Ground)

Straight with Keyway

Number of keyways can be specified up to 3.

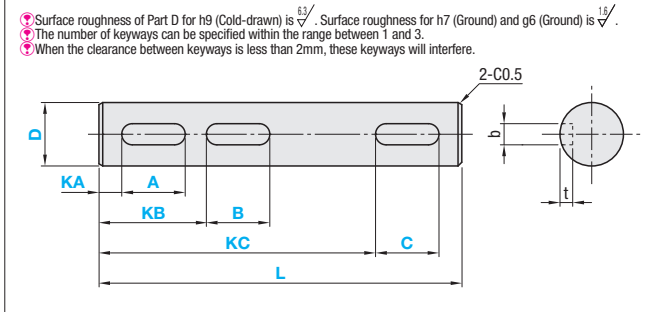


Type	D Tolerance	Material	Surface Treatment
(1) SFMKR	h9 (Cold-drawn)	S45C	Black Oxide
PSFMKR		Equivalent	Electroless Nickel Plating
SSFMKR		SUS304	-
(2) SFHKR	h7 (Ground)	S45C	Black Oxide
PSFHKR		Equivalent	Electroless Nickel Plating
SSFHKR		SUS304	-
(3) SFGKR	g6 (Ground)	S45C	Black Oxide
PSFGKR		Equivalent	Electroless Nickel Plating
SSFGKR		SUS304	-

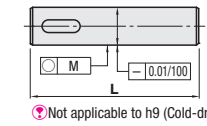
Detailed Keyway Dimensions

Shaft Dia.	Reference Dimension	Tolerance (M)	Reference Dimension	Tolerance	r
6	2	-0.004	1.2	+0.1 0	0.08- 0.16
8, 10	3	-0.029	1.8		
12	4	0	2.5		
13-17	5	-0.03	3.0	+0.2 0	0.18- 0.25
18-22	6	-0.03	3.5		
25, 30	8	0	4.0	+0.2 0	0.25- 0.4
35	10	-0.036	5.0		
40	12	0	5.0		
50	14	-0.043	5.5		

When KA<L, KA+A=L, KB+B=L and L-KC-C<L, keyway is shaped as shown below.



Circularity and Straightness

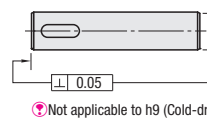


Circularity of Part D

over D or Less	Circularity M	
5	13	0.004
13	20	0.005
20	40	0.006
40	50	0.007

Not applicable to h9 (Cold-drawn).

Perpendicularity



Tolerances of L and Other Dimensions

Dimension over or Less	Tolerance	
2	6	±0.1
6	30	±0.2
30	120	±0.3
120	400	±0.5
400	1000	±0.8

(1)h9 (Cold-drawn)

Type	Part Number		L 1mm Increment	Keyway (1) KA, A	Keyway (2) KB, B	Keyway (3) KC, C
	D _{h9}	Tolerance		0.1mm Increment		
SFMKR	6	0 -0.030	15.0-400.0	KA+A≤L	KB+B≤L	KC+C≤L
	8	0	15.0-500.0			
	10	-0.036	15.0-600.0			
	12	0	15.0-700.0			
PSFMKR	15	-0.043	15.0-800.0	KA≥0	KB≥0	KC≥0
	20	0	30.0-1000.0			
SSFMKR (D6 is not available for SSFMKR.)	25	-0.052	50.0-1000.0	b≤A≤100	b≤B≤100	b≤C≤100
	30	0	60.0-1000.0			
	35	0 -0.062	70.0-1000.0			

(2)h7 (Ground)

Type	Part Number		L 1mm Increment	Keyway (1) KA, A	Keyway (2) KB, B	Keyway (3) KC, C
	D _{h7}	Tolerance		0.1mm Increment		
SFHKR	6	0 -0.012	15.0-400.0	KA+A≤L	KB+B≤L	KC+C≤L
	8	0	15.0-500.0			
	10	-0.015	15.0-600.0			
	12	0	15.0-700.0			
PSFHKR	15	-0.018	15.0-800.0	KA≥0	KB≥0	KC≥0
	20	0	30.0-1000.0			
SSFHKR	25	-0.021	50.0-1000.0	b≤A≤100	b≤B≤100	b≤C≤100
	30	0	60.0-1000.0			
	35	0	70.0-1000.0			
	40	-0.025	80.0-1000.0			
50	0	100.0-1000.0				

(3)g6 (Ground)

Type	Part Number		L 1mm Increment	Keyway (1) KA, A	Keyway (2) KB, B	Keyway (3) KC, C
	D _{g6}	Tolerance		0.1mm Increment		
SFGKR	6	-0.004 -0.012	15.0-400.0	KA+A≤L	KB+B≤L	KC+C≤L
	8	-0.005	15.0-500.0			
	10	-0.014	15.0-600.0			
	12	0	15.0-700.0			
PSFGKR	15	-0.006	15.0-800.0	KA≥0	KB≥0	KC≥0
	20	-0.017	30.0-1000.0			
SSFGKR (D13, D16, D18 or D22 is not available for SSFGKR.)	25	-0.007	50.0-1000.0	b≤A≤100	b≤B≤100	b≤C≤100
	30	-0.020	60.0-1000.0			
	35	-0.009	70.0-1000.0			
	40	-0.025	80.0-1000.0			
	50	-0.025	100.0-1000.0			

Ordering Example: Part Number - L - Keyway (1) - Keyway (2) - Keyway (3)

1 Keyway SFMKR10 - 325 - KA20 - A50

2 Keyways SFHKR30 - 330 - KA20 - A50 - KB120 - B20

3 Keyways SFGKR25 - 350 - KA10 - A10 - KB90 - B30 - KC210 - C30